

## REMARKS

Claims 1-21 and 23-28 are pending.

### Summary of Telephonic Interview

The undersigned wishes to thank Examiner Syed for taking the time to conduct a telephonic interview on Monday March 24, 2008. During the interview, the discussion focused on the independent claims (specifically claim 1) and what is meant by ‘reading’ a data page. The Examiner indicated that under a broad interpretation, the opening of a data page to implement a change involved ‘reading’ the data page. The applicants respectfully disagree with that reading of the claim language. The undersigned explained that even if opening a data page to implement a change involved ‘reading’ that data page, the data page to be changed is from a persistent data store and thus was already flushed. Thus, the *changed data page* (as opposed to *a data page*) is flushed before reading. In the interests of moving prosecution forward, the applicants have amended the claims in an attempt to make this more clear. The Examiner agreed to reconsider the references in light of these amendments.

### Claim Amendments

While the applicants disagree with the basis for certain rejections made in the Official Action, claims 1, 11 and 21 are nonetheless amended to expedite prosecution. No new matter has been added due to these amendments and support for these amendments can be found throughout the applicant’s specification and figures.

### Claim Rejections under 35 U.S.C. §103

Generally, claims 1-21 and 23-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,933,838 to Lomet (hereinafter “Lomet”) in view of U.S. Patent Publication No. 2004/0024795 to Hind et al. (hereinafter “Hind”). Essentially, the Office has maintained the rejections from the prior Office Action. Reconsideration is respectfully requested.

The applicants have amended claims 1, 11 and 21 to more clearly distinguish over Lomet and Hind by inserting the elements of generating a *changed* data page as a result of a transaction and isolating the transaction by flushing the *changed* data page prior to reading

the *changed* data page by a read operation separate from generating the *changed* data page. Lomet and Hind clearly do not disclose, teach or suggest these elements.

In addition, with respect to the specific grounds of rejection in the Office Action, the Office supports its rejection of claims 1, 11 and 21 with two main assertions. First, the Office asserts that even though Lomet discloses that flushing prior to reading (as claimed by applicants) is undesirable, the fact that such a possibility was considered is enough to “teach” it to one of ordinary skill in the art. The Office supports its assertion with a citation to MPEP 2141.02(VI), which cautions examiners that:

the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed....

But this is not a case in which there is a “mere disclosure of more than one alternative.” Rather, this is a case in which the reference “criticize[s], discredit[s], or otherwise discourage[s] the solution claimed” – a clear “teaching away.”

Specifically, whereas in the claimed invention flushing is performed prior to reading, Lomet *discredits* and *discourages* flushing prior to reading. Indeed, Lomet teaches one of skill in the art to do the exact opposite - reading prior to flushing. For example, Lomet states in column 6 that

Another aspect of this invention is to optimize the application read operation to *avoid writing the object data read to the log record* (lines 40-42; emphasis added),

and,

However, posting objects to the log [as part of a “flush” operation] often involves writing large amounts of data, and duplicating data found elsewhere on the system (lines 48-50),

and thus,

The read optimizing technique [of Lomet] eliminates posting the read values to the log by substituting, for the read values, an identity of the location from where the values are read and posting the identity instead of the values. However, the data is now only available from the read object itself and *hence, attention must be paid to the order in which objects are flushed to stable storage. If objects are flushed out of proper sequence, a particular state of an object may be irretrievably lost* (lines 52-60; emphasis added).

What Lomet is saying is that if the objects in Lomet are not read *before* flushing, there is a chance that the objects will be flushed out of proper sequence which could result in a particular state of an object being irretrievably lost. Thus, Lomet clearly *discourages* “flushing the transaction log to the persistent data store, *prior to* the changed data page being read,” as claimed by the Applicants. As a result, one of ordinary skill in the art is led away from the claimed invention by the teachings of Lomet. Thus, this is a classic example of the kind of “teaching away,” *i.e.*, one that expressly “criticize[s], discredit[s], or otherwise discourage[s] the solution claimed,” that should preclude a finding of obviousness. *See* Discussion of *In re Fulton* in MPEP 2141.02(VI). Reconsideration of this aspect of the rejection of claims 1, 11 and 21 is respectfully requested.

The second assertion that the Office makes in rejecting claims 1, 11 and 21 is that column 5, lines 54-56 and lines 62-65 of Lomet actually teach the applicants’ claimed flushing prior to reading. Specifically, the Office Action asserts that the cited portions of Lomet “clearly indicates that the flushing the application logs to in [*sic*] a stable log that resides on a stable memory (which is a persistent data store) within a database computer systems is the process of performing a *durable read*” (emphasis added). However, this assertion is actually contrary to the claimed invention, because a “durable read” is by definition an operation in which the data is read, then flushed – contrary to the claimed invention. Indeed, paragraph [0032] of the applicant’s specification expressly defines a “durable read” as “read data that is both committed and logged to the data store 208,” *i.e.*, the data of a durable read is first read, then flushed. Again, therefore, reconsideration of this ground of rejection of claims 1, 11 and 21 is respectfully requested.

Because the foregoing feature of the claims is neither taught nor suggested by Lomet and Hind, whether alone or in combination, the applicants respectfully submit that the subject matter of claims 1, 11 and 21 is patentably non-obvious over Lomet and Hind. And because claims 2-10, 12-20 and 23-28 each depend from claims 1, 11 and 21 respectively, those claims also must be patentably non-obvious over Lomet and Hind. Accordingly, favorable reconsideration of these rejections is respectfully requested.

## **CONCLUSION**

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**PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116**

For all the foregoing reasons, the Applicants respectfully submit that the present application is now in condition for allowance.

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